

Surgical Approaches in the Management of Benign Prostatic Enlargement

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DESCRIPTION

Benign prostatic enlargement represents one of the most frequently encountered conditions in aging male populations, often leading to lower urinary tract symptoms that can significantly affect daily life. These symptoms may include urinary frequency, nocturia, weak stream, hesitancy, and incomplete bladder emptying. While medical therapy remains the first line for many individuals, a considerable number of patients eventually require surgical intervention due to inadequate response or progression of symptoms.

The prostate gland surrounds the urethra just below the bladder, and its enlargement can lead to obstruction of urinary flow. Surgical management aims to relieve this obstruction by removing or reducing the obstructing tissue, thereby improving urinary dynamics. Over time, numerous techniques have been developed, each with its own advantages and limitations, allowing clinicians to select the most appropriate method based on patient characteristics and available resources.

Transurethral resection of the prostate, commonly referred to as TURP, has long been regarded as a widely practiced procedure for moderate to severe cases. It involves the insertion of a resectoscope through the urethra, allowing the surgeon to remove prostatic tissue using loop. This approach has demonstrated consistent outcomes in symptom relief and flow rate improvement. However, it is not without risks, including bleeding, electrolyte imbalance, and postoperative complications such as retrograde ejaculation.

In recent years, laser-based techniques have gained increasing acceptance. Procedures such as holmium laser enucleation of the prostate and photoselective vaporization utilize focused energy to remove or vaporize prostatic tissue. These methods offer advantages including reduced bleeding, shorter catheterization time, and suitability for patients on anticoagulant therapy. The enucleation approach, in particular, allows for removal of large volumes of tissue and provides material for histological examination.

Open or simple prostatectomy remains an option for significantly enlarged glands, especially when minimally invasive methods are not feasible. This procedure involves removal of the inner portion of the prostate through an abdominal or bladder approach. While effective, it is associated with longer recovery times and greater

perioperative risks, which has led to a decline in its use as less invasive alternatives have become more accessible.

Patient selection plays a critical role in determining the appropriate surgical approach. Factors such as prostate size, symptom severity, comorbid conditions, and patient preference must all be taken into account. Preoperative evaluation typically includes digital rectal examination, prostate-specific antigen testing, imaging, and urodynamic studies when indicated. These assessments help ensure that the chosen intervention aligns with the underlying pathology and patient expectations.

Postoperative outcomes are generally favorable across most surgical modalities, with significant improvements in urinary symptoms and quality of life. Nevertheless, potential complications must be discussed with patients prior to intervention. These may include urinary incontinence, erectile dysfunction, urethral stricture formation, and the need for re-treatment. Advances in surgical technique and perioperative care have contributed to reducing the incidence of these events.

The role of anesthesia and perioperative management is also important in optimizing surgical results. Many procedures can now be performed under regional anesthesia, reducing the risks associated with general anesthesia, particularly in older patients with comorbidities. Enhanced recovery protocols, including early mobilization and careful fluid management, further contribute to improved patient outcomes.

Economic considerations continue to influence the adoption of different surgical methods. While advanced technologies may involve higher initial costs, they often lead to shorter hospital stays and reduced complication rates, which can offset expenses in the long term. Healthcare systems must evaluate these factors when determining resource allocation and access to care.

CONCLUSION

Surgical management of benign prostatic enlargement encompasses a wide range of techniques, each offering distinct benefits. The choice of procedure should be guided by a comprehensive evaluation of patient factors, available expertise, and resource considerations. Innovations in imaging, surgical instruments, and

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energy delivery systems continue to shape the field. Additionally, long-term data from clinical studies will help clarify the durability and comparative effectiveness of newer interventions. With

continued advancements and a focus on individualized care, surgical treatment remains a highly effective option for patients experiencing significant symptoms related to prostatic enlargement.